CLAIMS

1. A multi-speed transmission comprising:

an input shaft;

an output shaft;

first, second and third planetary gear sets each having first, second and third members;

said input shaft being continuously interconnected with a member of said planetary gear sets, and said output shaft being continuously interconnected with another member of said planetary gear sets;

a first interconnecting member continuously interconnecting said first member of said first planetary gear set with said first member of said second planetary gear set and with a stationary member, said members interconnected with said stationary member being different from said members interconnected with said input of said output shaft, respectively;

a second interconnecting member continuously interconnecting said second member of said second planetary gear set with said first member of said third planetary gear set;

a first torque-transmitting mechanism selectively interconnecting a member of said first planetary gear set with a member of said second planetary gear set;

a second torque-transmitting mechanism selectively interconnecting a member of said first planetary gear set with a member of said second planetary gear set, the pair of members interconnected by said second torque-transmitting mechanism being different from the pair of members interconnected by said first torque-transmitting mechanism;

a third torque-transmitting mechanism selectively interconnecting a member of said third planetary gear set with a member of said first planetary gear set;

a fourth torque-transmitting mechanism selectively interconnecting a member of said third planetary gear set with a member of said first planetary gear set, the pair of members interconnected by said fourth torque-transmitting mechanism being different from the pair of members interconnected by said third torque-transmitting mechanism;

a fifth torque-transmitting mechanism selectively interconnecting a member of said first planetary gear set with a member of said second or third planetary gear set, the pair of members interconnected by said fifth torque-transmitting mechanism being different from the pairs of members interconnected by said first, second, third and fourth torque-transmitting mechanisms, respectively;

a sixth torque-transmitting mechanism selectively interconnecting a member of said third planetary gear set with a member of said first or second planetary gear set, the pair of members interconnected by said sixth torque-transmitting mechanism being different from the pairs of members interconnected by said first, second, third, fourth and fifth torque-transmitting mechanisms, respectively; and

a seventh torque-transmitting mechanism selectively interconnecting a member of said first or third planetary gear set with another member of said first, second or third planetary gear set, or with said stationary member, the pair of members of said planetary gear sets interconnected by said seventh torque-transmitting mechanism being different from the pairs of members interconnected by said first, second, third, fourth, fifth and sixth torque-transmitting mechanisms, respectively, and the member of said first or third planetary gear set interconnected with said stationary member by said seventh torque-transmitting mechanism being different than the members interconnected with said input shaft and said output shaft, respectively;

said torque-transmitting mechanisms being engaged in combinations of two to establish at least eight forward speed ratios and at least one reverse speed ratio between said input shaft and said output shaft.

2. The transmission defined in claim 1, wherein said first, second, third, fourth, fifth and sixth torque-transmitting mechanisms comprise clutches, and said seventh torque-transmitting mechanism comprises a brake.

3. The transmission defined in claim 1, wherein said first, second, third, fourth, fifth, sixth and seventh torque-transmitting mechanisms comprise clutches.

4. The transmission defined in claim 1, wherein planet carrier assembly members of each of said planetary gear sets are single-pinion carriers.

5. The transmission defined in claim 1, wherein at least one planet carrier assembly member of said planetary gear sets is a double-pinion carrier.

6. A multi-speed transmission comprising:

an input shaft;

an output shaft;

a planetary gear arrangement having first, second and third planetary gear sets, each planetary gear set having first, second and third members;

said input shaft being continuously interconnected with a member of said planetary gear sets, and said output shaft being continuously interconnected with another member of said planetary gear sets;

a first interconnecting member continuously interconnecting said first member of said first planetary gear set with said first member of said second planetary gear set and with a stationary member, said members interconnected with said stationary member being different from said members interconnected with said input shaft and said output shaft, respectively;

a second interconnecting member continuously interconnecting said second member of said second planetary gear set with said first member of said third planetary gear set; and

seven torque-transmitting mechanisms for selectively interconnecting said members of said planetary gear sets with a stationary member or with other members of said planetary gear sets, said seven torque-transmitting mechanisms being engaged in combinations of two to establish at least eight forward speed ratios and at least one reverse speed ratio between said input shaft and said output shaft.

7. The transmission defined in claim 6, wherein a first of said seven torque-transmitting mechanisms is operable for selectively interconnecting a member of said first planetary gear set with a member of said second planetary gear set.

8. The transmission defined in claim 6, wherein a second of said seven torque-transmitting mechanisms is operable for selectively interconnecting a member of said first planetary gear set with a member of said second planetary gear set, the pair of members interconnected by said second torque-transmitting mechanism being different from a pair of members of said planetary gear sets interconnected by a first of said seven torque-transmitting mechanisms.

9. The transmission defined in claim 6, wherein a third of said seven torque-transmitting mechanisms is operable for selectively interconnecting a member of said third planetary gear set with a member of said first planetary gear set.

10. The transmission defined in claim 6, wherein a fourth of said seven torque-transmitting mechanisms is operable for selectively interconnecting a member of said third planetary gear set with a member of said first planetary gear set, the pair of members interconnected by said fourth torque-transmitting mechanism being different from a pair of members of said planetary gear sets interconnected by a third of said seven torque-transmitting mechanisms.

11. The transmission defined in claim 6, wherein a fifth of said seven torque-transmitting mechanisms is operable for selectively interconnecting a member of said first planetary gear set with a member of said second planetary gear set, the pair of members interconnected by said fifth torque-transmitting mechanism being different from pairs of members of said planetary gear sets interconnected by a first, second, third and fourth of said seven torque-transmitting mechanisms, respectively.

12. The transmission defined in claim 6, wherein a sixth of said seven torque-transmitting mechanisms selectively interconnects a member of said first, second or third planetary gear set with a member of said first or second planetary gear set, the pair of members interconnected by said sixth torque-transmitting mechanism being different from pairs of members of said planetary gear sets interconnected by a first, second, third, fourth and fifth of said seven torque-transmitting mechanisms, respectively.

13. The transmission defined in claim 6, wherein a seventh of said seven torque-transmitting mechanisms selectively interconnects a member of said first or third planetary gear set with another member of said first, second or third planetary gear sets or with said stationary member, the pair of members interconnected by said seventh torque-transmitting mechanism being different from a pair of members of said planetary gear sets interconnected by a first, second, third, fourth, fifth and sixth of said seven torque-transmitting mechanisms, respectively, and the member interconnected with said stationary member by said seventh torque-transmitting mechanism being different from the members interconnected with said input shaft and said output shaft, respectively.

14. The transmission defined in claim 6, wherein planet carrier assembly members of each of said planetary gear sets are single-pinion carriers.

15. The transmission defined in claim 6, wherein at least one planet carrier assembly member of said planetary gear sets is a double-pinion carrier.